



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/283,233	04/01/1999	TADAKUNI NARABU	SON-1532	9698

7590 03/04/2003

RONALD P KANANEN  
RADER FISHMAN AND GRAUER  
THE LION BUILDING  
1233 20TH STREET N W SUITE 501  
WASHINGTON, DC 20036

EXAMINER

WILSON, JACQUELINE B

ART UNIT	PAPER NUMBER
----------	--------------

2612

DATE MAILED: 03/04/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/283,233

Applicant(s)

Narabu

Examiner

Jacqueline Wilson

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Apr 1, 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4-5 6) ☐ Other:

Art Unit: 2612

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1 and 4- 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ochi (US 6,426,776) and Mihara (US 5,671,080).**

Regarding Claim 1, Ochi'776 teaches a mirror body (14) to reflect image pickup light from a subject at a mirror face, a linear sensor (11) for taking the image pickup light reflected from the mirror body and subjecting the image pickup light thus taken to photoelectric conversion, wherein the mirror body is disposed so that the length direction is substantially parallel to the length direction of the linear sensor (see fig. 1). However, Ochi'776 fails to teach the mirror body is designed in a polygonal prism form and provided so as to be rotatable around

Art Unit: 2612

the center of a plane which is substantially perpendicular to the length direction of the mirror body. However, Mihara'080 teaches an image input device including a mirror body (1) which is designed in a polygonal prism for and formed of mirror faces on the side peripheral surfaces thereof to reflect image pickup light from a subject at a mirror face. By using this polygonal mirror, the optical axis is deflected in a similar manner as the mirror body of Ochi'776. One having ordinary skill would recognize using Mihara'080 polygonal mirror will provide an increase in scanning speed compared to a flat mirror body. Therefore, it would have been obvious to one having ordinary skill in the art to use a polygonal mirror in the device of Ochi'776 as a method of image pickup for providing a higher scan rate.

Regarding Claim 4, Ochi'776 disclose a communication means (fig. 2, 86) for communicating image pickup information output from the linear sensor to the outside.

Regarding Claim 5, although Ochi'776 teaches an linear image pickup sensor, it is not specifically disclosed that the linear sensor is constructed by a semiconductor image pickup element. However, it is notoriously well known in the art for sensors to be made up on a semiconductor substrate for accumulating charges for producing images and thus would have been obvious, if not inherent, for the sensor in Ochi'776 to also be constructed by a semiconductor image pickup element. (Official Notice)

Art Unit: 2612

**4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ochi'776, Mihara'080 and Jones (US 5,993,077).**

Regarding Claim 2, Ochi'776 teaches a housing in which the mirror body and linear sensor are accommodated (10), and a slender incidence window (10a) for passing the image pickup light therethrough into the housing is formed so that the length direction thereof is substantially parallel to the length direction of the mirror body. However, Ochi'776 fails to disclose support legs which are formed at the formation side of the incidence window of the housing so as to expand from the housing to the outside and support the housing, the support legs being retractably provided in the housing or detachably mounted to the housing. Jones'077 teaches that it is well known in the art to have a stand for an optical device, such as a camera (12), which is detachable from the camera. With reference to figure 1, Jones'077 shows a camera (12) mounted on a support with legs (16) formed at the formation side of the incidence window. This aids the user in producing clear images of a scene, in this case for investigation purposes (col. 6, lines 28+). Therefore, it would have been obvious to one having ordinary skill in the art to have support legs which are formed at the formation side of the incidence window of the housing so as to expand from the housing to the outside and support the housing, the support legs being retractably provided in the housing or detachably mounted to the housing.

**5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ochi'776, Mihara'080 and Kashitani (US 5,757,518).**

Art Unit: 2612

Regarding Claim 3, Ochi'776 does not specifically disclose a storage means for storing image pickup information. However, Kashitani '518 teaches a storage means (referred to image memory 54) for storing image pickup information output from a linear sensor (see fig. 6). This is advantageous so the information maintained for further processing. Storage means are notoriously well known in the art and would have been obvious in the system of Ochi'776 for storing image data. Therefore, it would have been obvious to one having ordinary skill in the art to further include a storage means for storing image pickup information output from the linear sensor.

**6. Claims 6, 8, 9, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ochi (US 6,426,776).**

Regarding Claim 6, Ochi'776 teaches a housing (10) having a slender incidence window (10a) to pass image pickup light from a subject therethrough into the housing, a mirror body (14) which has mirror faces for reflecting the image pickup light from the incidence window and rotatably or swingably provided in the housing (15), a linear sensor (11) for taking the image pickup light reflected from the mirror body to subject the image pickup light to photoelectric conversion, and an illuminator (fig. 1, 91 and fig. 26, 391). This light source is present for the purpose of illuminating a scene/object at the time image pickup is performed. Although Ochi'776 does not teach a plurality of illuminators, It would have been an obvious matter of design choice at the time the invention was made to include a plurality of illuminators as desired

Art Unit: 2612

by the manufacturer. Therefore, it would have been obvious to one having ordinary skill in the art to modify Ochi'776 by including a plurality of illuminators for lighting up the subject.

Regarding Claim 8, Ochi'776 teaches a mirror body is a flat plate (14) having one face or both faces being formed of mirror faces and a shaft (15) formed along the mirror body is rotatable or swingable around the shaft and wherein the incidence window (10a) is formed so that the length direction is substantially parallel to the shaft of the mirror body (see fig. 1).

Regarding Claim 9, Ochi'776 teaches a first driving means (150), a second driving means (190), and a timing signal generating means (referred to as a CPU 71) which is responsible for outputting timing signals to the first and second driving means so that the illuminators are successively turned on at a predetermined timing with respect to the rotational or swinging motion of the mirror body (see cols. 6-7). This enables the device to illuminate the object simultaneously with image pickup.

Regarding Claim 12, Ochi'776 teaches information output from the linear sensor is sent to an external device through a communication means (see fig. 2; 86). This indicates that a communication means is present so that the information is able to be sent to the external device.

Regarding Claim 13, although Ochi'776 teaches an linear image pickup sensor, it is not specifically disclosed that the linear sensor is constructed by a semiconductor image pickup element. However, it is notoriously well known in the art for sensors to be made up on a semiconductor substrate for accumulating charges for producing images and thus would have

Art Unit: 2612

been obvious, if not inherent, for the sensor in Ochi'776 to also be constructed by a semiconductor image pickup element. (Official Notice)

**7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ochi (US 6,426,776) and Mihara'080.**

Regarding Claim 7, Ochi'776 fails to specifically disclose the mirror body is designed in a polygonal prism. However, Mihara'080 teaches the mirror body is designed in a polygonal prism form and formed of the mirror faces on all the side peripheral surfaces thereof, and disposed so that the length direction thereof is substantially parallel to the length direction of the sensor and provided so as to be rotatable around the center of a plane (1a) which is substantially perpendicular to the length direction of the mirror body (see fig. 1). By using this polygonal mirror, the optical axis is deflected in a similar manner as the mirror body of Ochi'776. One having ordinary skill would recognize using Mihara'080 polygonal mirror will provide an increase in scanning speed compared to a flat mirror body. Therefore, it would have been obvious to one having ordinary skill in the art to use a polygonal mirror in the device of Ochi'776 as a method of image pickup for providing a higher scan rate.

**8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ochi'776, Mihara'080, and Jones (US 5,993,077).**



Art Unit: 2612

Regarding Claim 10, Ochi'776 fails to disclose support legs which are formed at the formation side of the incidence window of the housing so as to expand from the housing to the outside and support the housing, the support legs being retractably provided in the housing or detachably mounted to the housing. However, Jones'077 teaches that it is well known in the art to have a stand for an optical device, such as a camera (12), which is detachable from the camera. With reference to figure 1, Jones'077 shows a camera (12) mounted on a support with legs (16) formed at the formation side of the incidence window. This aids the user in producing clear images of a scene, in this case for investigation purposes (col. 6, lines 28+). Therefore, it would have been obvious to one having ordinary skill in the art to have support legs which are formed at the formation side of the incidence window of the housing so as to expand from the housing to the outside and support the housing, the support legs being retractably provided in the housing or detachably mounted to the housing.

**9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ochi'776, Mihara'080, and Kashitani (US 5,757,518).**

Regarding Claim 11, Ochi'776 does not specifically disclose a storage means for storing image pickup information. However, Kashitani '518 teaches a storage means (referred to image memory 54) for storing image pickup information output from a linear sensor (see fig. 6). This is advantageous so the information maintained for further processing. Storage means are notoriously well known in the art and would have been obvious in the system of Mihara'080 for

Art Unit: 2612

storing image data. Therefore, it would have been obvious to one having ordinary skill in the art to further include a storage means for storing image pickup information output from the linear sensor.

***Conclusion***

10. Any inquiries concerning this communication from the examiner should be directed to **Jacqueline Wilson** whose telephone number is (703) 308-5080. The examiner can normally be reached Monday-Friday (alternate Fridays off) from 9:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Wendy Garber**, can be reached at (703) 305-4929. The fax number for this group is (703) 872-9314.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or Faxed to:**

(703) 872-9314, (for informal or draft communications, please label

“PROPOSED” or “DRAFT”)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, V.A., Sixth Floor (Receptionist).


Application/Control Number: 09/283,233

Page 10

Art Unit: 2612

JBW

December 27, 2002

  
ANDREW FAILE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600